

Having thus described the preferred embodiments, what is claimed is:

1. An image processing method comprising:  
receiving packets of compressed image data;  
decompressing a first subset of the compressed image data, the first subset being less than a complete set; and  
from the subset, determining an adjustment to be applied to the image data.
2. The image processing method as set forth in claim 1, further comprising:  
continued decompressing additional subsets of the compressed image data resulting in a decompressed image at a desired resolution; and  
applying the adjustment to the decompressed image.
3. The image processing method as set forth in claim 1, further comprising:  
incorporating the adjustment into the compressed image data; and  
storing compressed image data incorporating the adjustment.
4. The image processing method as set forth in claim 3, wherein the step of incorporating the adjustment into the compressed image data includes bind thereto at least one of a tone reproduction curve and a sharpness filter which have been generated therefor.
5. An image processing method comprising:  
receiving wavelet-domain data defining a digital image, the wavelet-domain data comprising N levels of decomposition;  
inputting M levels of decomposition into an automated image enhancement system, where M is less than N;  
from the M levels of decomposition, deriving at least one of a correction tone reproduction curve and a sharpness filter for enhancement of the input digital image data;  
decompressing the image data to obtain decompressed image data representing the input digital image at a selected level of decomposition; and,

using the at least one of said final tone reproduction curve and said sharpness filter to enhance the decompressed image data.

6. The image processing method as set forth in claim 5, further comprising:  
storing the at least one of said final tone reproduction curve and said sharpness filter for subsequent use in enhancing the digital image.

7. The image processing method as set forth in claim 5, wherein the step of inputting M levels of decomposition into an automated image enhancement system comprises inputting the M levels of decomposition to at least one of an exposure enhancement module, a color balance enhancement module, a contrast enhancement module, and a luminance enhancement module, said at least one module receiving the M levels of decomposition and deriving a respective tone reproduction curve.

8. The image processing method as set forth in claim 6, wherein the step of storing the at least one of the final correction tone reproduction curve and the sharpness filter for subsequent use comprises binding the at least one of the final correction tone reproduction curve and sharpness filter to the received image data.

9. The image processing method as set forth in claim 7, wherein the step of inputting the M levels of decomposition to an automated image enhancement system further comprises inputting the M levels of decomposition to a sharpness enhancement module that derives a sharpness filter based upon the M levels of decomposition.

10. A wavelet-domain image processing method comprising:  
receiving image data defining an N-level wavelet decomposition of a digital image, each of level  $n = 1$  to N of said decomposition including a horizontal subband H, a vertical subband V and a diagonal subband D; and  
performing image enhancement analysis on an Mth level wavelet decomposition, where M is less than N.

11. A xerographic apparatus which processes wavelet-domain image data comprising:

means for receiving the wavelet-domain image data representative of an input digital image, said wavelet-domain image data including N-levels of wavelet decompositions;

an M-level extractor which extracts an Mth level wavelet decomposition from the wavelet-domain image data where M is less than N, the extracted Mth level wavelet decomposition being a low resolution representation of the input digital image; and

an image enhancement system which receives the extracted Mth level wavelet decomposition, the system deriving an enhancement process from the extracted Mth level wavelet decomposition to adjust a high resolution representation of the input digital image.

12. The apparatus for processing wavelet-domain image data as set forth in claim 11, where the enhancement process derived by the image enhancement system comprises a tone reproduction curve.

13. The apparatus for processing wavelet-domain image data as set forth in claim 11, where the enhancement process derived by the image enhancement system comprises a sharpness filter.

14. The apparatus for processing wavelet-domain image data as set forth in claim 11, further comprising:

means for converting the wavelet-domain image data into the high resolution representation of the input digital image; and,

a processor which applies the enhancement process to the high resolution representation of the input digital image provided by the converting means.

15. The apparatus for processing wavelet-domain image data as set forth in claim 11, further comprising:

a storage which at least temporarily stores the enhancement process for subsequent use in enhancing the input digital image.

16. The apparatus for processing wavelet-domain image data as set forth in claim 15, where the storage comprises data representative of the enhancement process inserted in the wavelet-domain image data.

17. The apparatus for processing wavelet-domain image data as set forth in claim 11, where the image enhancement system comprises:

at least one of an exposure enhancement module, a color balance enhancement module, a contrast enhancement module, and a luminance enhancement module, said at least one module receiving and deriving a respective tone reproduction curve based upon at least the extracted Mth level wavelet decomposition; and,

a combiner which combines derived tone reproduction curves into a final correction tone reproduction curve.

18. The apparatus for processing wavelet-domain image data as set forth in claim 11, where image enhancement system further comprises a sharpness enhancement module that derives a sharpness filter based upon the extracted Mth level wavelet decomposition.